SATURDAY, OCTOBER 25, 1873.

## ORIGINAL LECTURES.

### CLINICAL LECTURE

### ON A CASE OF RUPTURE OF THE AORTIC VALVES.

BY WILLIAM PEPPER, M.D.,

Lecturer on Clinical Medicine at the University of Pennsylvania.

GENTLEMEN:—I avail myself of the opportunity afforded me by the post-mortem examination of a case which has been under my care for the past four or five years, to speak to you of a very rare accident,—the rupture or separation of one of the valves of the aorta from a mechanical cause. These valves, more than any other part of the circulatory apparatus, are exposed to violence and overstrain. Thus, in all classes of laborers whose work involves a great amount of muscular exertion with the arms, a disproportionately large number of cases of aortic disease will be found. And the mode in which this result is brought about is readily explained. In persons so employed we find the heart, stimulated by the active exertions, contracting frequently and with great force; the aorta is of course correspondingly distended, and the pressure exerted to force forward the blood is extremely great. Under these circumstances it is evident that if anything occur to prevent the free onward movement of the blood through the vessels, the arterial tension must be greatly increased, and the recoil upon the valves of the aorta which close to prevent reflux into the left ventricle proportionately powerful. Now, the peculiarity of violent muscular exertions with the arms is that they tend to produce precisely such obstruction. Immediately before the effort, whether at striking or lifting heavy weights, a deep inspiration is taken, which aids in filling the cavities of the heart to their utmost, and then, in order to afford fixed points for the contraction of the muscles of the arms and shoulders and back, the chest is held rigidly fixed. The violent contractions of the muscles of the neck which follow compress the carotid arteries, while those of the muscles connected with the arms impede the free flow of blood through the subclavians and their branches. Thus, while the tension within the chest is greatly increased, and the heart is stimulated to violent contraction, there is also an enormous elevation of arterial tension. The strain which results must expend itself *directly* upon the walls of the left ventricle, which must over-exert themselves to press forward the blood; and *indirectly* upon the aortic valves, which are compelled to bear the shock of a recoil of the blood-stream violent in proportion. When such over-strain of these tissues is repeated hundreds of times daily, it will cause stretching of the parts, and later, when this has gone to a certain extent, a process of inflammation of a low grade will be established, which leads to thickening and softening, and subsequently to contraction and stiffening, of the leaflets of the valve. You will not be surprised, therefore, to learn that such disease of the aortic valves is far most frequently found in men, and especially in those whose occupations compel them to make just such exertions as are above described. I have said that the gradual production of disease of the aortic valves under such influences is easily understood; but I wish further to direct your attention to the question whether it is possible that, in a person having no disease whatever of the heart or aorta, a sudden and most extreme effort with the muscles of the trunk and arms should cause such abrupt and violent stretching of the aortic valves as to rupture one of them, or tear it loose from its points of insertion.

It is by no means rare to find, on examining aortic valves which have been the seat of advanced disease, a laceration of one of the leaflets extending from the free border to a varying depth in the valve. The edges of the laceration are irregular, and the entire valve is thickened, and often calcareous and brittle. In such cases there has been a history of long-standing aortic disease with increasing amount of regurgitation, and of course the solution of continuity of one of the leaflets must have greatly favored this. I have found, more frequently than the above condition of laceration, a partial condition of separation of two leaflets from elongation of their common line of attachment to the aortic wall. This extremity of the leaflets is therefore no longer inserted on the normal level, and in consequence their free border must usually be more or less reverted when subjected to the pressure of the column of blood in the aorta, so that in this case also considerable regurgitation takes place. It will be found that valves which have been thus partially separated invariably present evidences of disease, and are thickened and usually shortened. The difficulty in such cases lies in determining what the condition of the valve may have been at the time the laceration or separation occurred.

In most cases there is no history of any sudden violent exertion followed immediately by symptoms of frightful disturbance of the heart's action, such as would ensue upon such an accident, but rather of gradually increasing cardiac disease, with occasional acute aggravations from ordinary causes; and the evidences of long-standing disease are so marked as to render it clear that the lesion of the valve has been the result of diseased action.

In some rare instances, however, the development of the symptoms of insufficiency of the aortic valves is so sudden, and comes on in the midst of apparent health, or after such slight evidences of cardiac disease, as to render it more difficult to decide as to the previous state of these valves. I know of no case upon record where such an accident has been suspected, and where death has occurred soon afterwards and it has been proved that a laceration of a previously healthy valve has really taken place. It has always happened that life has been prolonged for some time; and it then becomes difficult to determine with certainty whether the evidences of

disease of the valve have been entirely the result of the injury to its tissues, or whether there was not some previous morbid state which so weakened the valves or their attachments as to indirectly cause their rupture or separation. Although I cannot deny the abstract possibility of the laceration of a healthy valve, I am inclined to believe that the other will uniformly be found the real state of the case, as it undoubtedly was in the following remarkable case of almost complete separation of two aortic leaflets from the line of their common attachment to the wall of the aorta.

*Case.*—D. D., aged 35 years, a bar-keeper, first came under observation in the summer of 1868. He had enjoyed general good health until within a few years, when he suffered from several attacks of sub-acute rheumatism. For about eighteen months previous he had also felt some oppression and palpitation of the heart on exertion or after excitement. His habits were very intemperate and dissipated; but there was no evidence of his ever having had syphilis.

In April, 1868, while struggling to turn a windlass to raise a very great weight, he felt a sudden severe pain and sense of failing or *giving way* at the præcordia. He staggered and had to be helped to a seat. Those who helped him asserted that a curious whirring or fluttering sound became suddenly audible even to the distance of a foot from the chest, and at the same time violent tumultuous action of the heart (which had never before been noticed) became readily visible. He was obliged to throw open all his upper clothing, and beat himself upon the chest and clutch at his throat, in the extremity of his distress. Orthopnœa continued, and he passed the entire night sitting by an open window. The following day he began to spit blood quite freely. The pulse was estimated by the physician who first saw him to be 212 in the minute. No systematic treatment was adopted, save moderate stimulation and counter-irritation over the præcordia.

When first seen by me, fifteen days after the accident, his condition was as follows: Surface very pale; extremities cold and damp, and some œdema of the feet; mind dull, with occasional slight wandering; respirations (sitting) 35 in the minute, and labored; frequent cough, with expectoration of pure unaerated blood in large mouthfuls. Over both lungs, especially posteriorly, the respiratory murmur was accompanied by a fine crepitant râle, heard only at the end of inspiration. No fulness or pulsation of the jugulars; flapping, jerking, but feeble pulsation of the carotids at the base of the neck, and a faint murmur heard along the course of these vessels; radial pulse feeble, very small, 186 in the minute. The impulse of the heart was feeble, without any fremitus; the apex-beat was extended, and lay to the left of the vertical line of the nipple, and too low down; the area of cardiac dulness was somewhat increased; the heart-sounds were confused and tumultuous; at the apex no positive murmur could be detected, and there was no murmur transmitted towards the left axilla or heard at the angle of the left scapula. No murmur was audible at the xiphoid cartilage. At the third interspace, close to the left edge of the sternum, a distinct, short murmur was heard, which could not be timed, owing to the rapidity of the heart's action; it was transmitted up along the left edge of the sternum to the second interspace. At the aortic cartilage, a confused, tumultuous sound was heard which defied analysis.

He was ordered turpentine stupes to the chest; beef-tea and milk-punch. Tincture of digitalis was given also, in doses of gtt. x every third hour. On the fourth day the dose was increased to gtt. xx; and the next day, finding no relief was produced, another specimen of digitalis was obtained and given in doses of gtt. x, q. t. h. After thirty-six hours' use of the latter, hæmoptysis ceased entirely; respirations fell to 24, and grew more easy and full; œdema diminished, though there was still some puffiness of the feet and face; pulse much fuller and stronger, 92 in the minute, distinctly jerking; heart's action much better accentuated and stronger; no murmur at apex or at epigastrium. There was, however, a strong murmur, distinctly diastolic, large and moderately harsh, heard at the third left interspace, and thence upward to the second left interspace, and more strongly across and upwards over the sternum to the second right interspace. The digitalis was continued in reduced doses. The diagnosis was made of laceration of one of the aortic valves, with probably some pre-existing disease of their tissue.

The subsequent history of the case can be briefly sketched. The patient lived over five years afterwards, and died suddenly on the 20th of September, 1873.

During this long period he never regained health sufficiently to return to work even of the lightest kind. He was able at times to walk a few squares, but much of each year was confined to the house. He suffered several times from attacks of articular and muscular rheumatism, which yielded readily to the use of opium and iodide of potassium and acetate of potassa in full doses. Usually the action of his heart was regular,—75 to 80 a minute,—and he suffered only from a sense of weight at the præcordia. But at irregular intervals he also suffered from terrible attacks of cardiac disturbance, brought on by over-exertion or occurring in connection with rheumatic fever. Then the action of the heart became tumultuous and very rapid: on repeated occasions I have counted it at 190, 200, 220, and have known it so much more rapid than this that I could not follow it at all. The heart gradually underwent enlargement, the area of dulness increasing, and the area of impulse extending, while the impulse grew heaving. The physical signs continued to indicate extensive aortic regurgitation: a loud, long, and rather hoarse diastolic murmur was heard very strongly all along the sternum, and at the second right interspace. It was equally intense at the xiphoid cartilage as at the latter point. It was transmitted also to the apex, though with rapidly lessening force. It was also transmitted along the arch of the aorta and into the great arteries; though here it lost its purely diastolic rhythm and became a prolonged bruit, occupying part of both periods of the heart's action. No other valvular murmur was heard. There was marked visible jerking pulsation of the arteries. The man's appearance was always characteristic of extreme anæmia of the arterial circulation. His surface and mucous membranes were very pale, and the pupils dilated. No symptoms of embolism presented themselves at any time. There was occasionally slight return of hæmoptysis. No enlargement of the liver or the spleen, and no albuminuria, occurred.

His treatment consisted in careful regulation of diet, clothing, and exercise. So long as the action of the heart continued regular and almost normal in frequency, he only took at intervals courses of iodide of potassium or of arsenic. Many transient disturbances of different functions also needed simple treatment. His great source of relief was, however, digitalis. On every occasion when his heart became excited and hurried in its action, a sign which was always followed by grave symptoms so soon as the pulse-rate reached 120 to 150, I placed him on the use of tincture of digitalis, in doses of ten drops every five, three, or two hours, according to the urgency of the symptoms, and then, as they subsided, gradually reduced the frequency of its administration. Its use never failed to give prompt relief. The pulse grew slower, fuller, and stronger; cardiac pain and oppression diminished. In no instance did any

disagreeable, much less any dangerous, symptom attend its action.

About the 10th of September I saw him, after a long interval caused by my absence from the city, and found him much exhausted by intense pain in the cardiac region, which had lasted several weeks. The pain was sharp and cutting, and extended round the base of the left chest, along the sternum, and through to the spine. The pulse was extremely frequent and feeble; the heart's action tumultuous, weak, and undulatory. Under the prompt use of digitalis and quinia he soon began to improve, and the amount of digitalis had been for several days reduced to five drops twice or three times a day, when, without any warning, he fell dead from his chair.

The autopsy was made twenty-four hours after death, the examination being limited to the thorax and the abdomen. There was no trace of dropsy. The liver was too firm, and presented partial nutmeg congestion. The spleen was one-half too large, its tissue too firm, with enlargement of trabeculæ, but without emboli.

The kidneys were not enlarged; their capsules were thickened, but could be stripped off, bringing away a few little bits of tissue. The cortex was coarse-grained and hardened. The whole organs were much congested; there were no emboli.

The ribs were very firmly ossified. The lungs were adherent throughout; their tissues essentially healthy.

The arch of the aorta was much dilated; the entire width of the vessel when opened being about 5″. Its walls were much thickened, and highly atheromatous. This condition was most marked near the heart, and gradually diminished in the abdominal aorta. The subclavians and iliacs were but slightly atheromatous. The pulmonary artery was also dilated.

The heart was much enlarged, and weighed, after careful washing, twenty-five ounces. The *right ventricle* was moderately dilated, and its walls somewhat thickened; the tricuspid valve appeared healthy. The valves of the pulmonary artery were somewhat enlarged, but healthy. The left ventricle was the seat of the greatest enlargement. Its walls were in places $\frac{1}{8}$″ thick, and its cavity much dilated. The muscular tissue was hard and reddish. The mitral valves were healthy, and stood the hydrostatic test.

On opening the aorta there appeared to be but two leaflets, one of which was somewhat larger than normal, while the other was almost twice as large. On examining this latter one more carefully, it was found to be composed of two leaflets which were fused together, their common attachment to the aortic wall having been separated along the entire line from its highest point down to the level of the base of the valves. This abnormal leaflet was quite easily reverted into the cavity of the ventricle, and would then of course have caused very great insufficiency of the aortic valves. Even when it was not so reverted, the hydrostatic test showed considerable regurgitation through that orifice. The line of the former attachment of these leaflets was marked by a Y-shaped elevation on the inner surface of the aorta. This did not altogether resemble ordinary atheroma; it was grayish-white, firm, and fibrous in texture, and seemed like the cicatrix of a branching linear ulcer or rent of the lining membrane. It had undergone none of the secondary changes (alterations of color to a yellowish tint, softening, or calcareous change) which were seen in most of the neighboring atheromatous patches. The leaflets themselves were thickened and too rigid; their ventricular surface was smooth and entirely free from vegetations, but along the arterial face of the base of attachment there were irregular calcareous formations.

In reviewing this interesting case and observing the abruptly sudden development of symptoms of extreme aortic regurgitation, there can, I think, be felt no doubt that at the moment when the violent muscular effort was made there was a forcible separation of the leaflets from one of their lines of attachment, as above described. I have also but little doubt, considering the very advanced atheromatous changes in the aorta, and the positive symptoms of cardiac disturbance presented by the patient for a year previous, that there had been some pre-existing disease of the aorta, which impaired the consistency of its inner coats and thus favored the occurrence of the laceration.

In its clinical aspects the chief interest of the case lay in its treatment. There could be no uncertainty as to the diagnosis, since the characteristic symptoms of aortic regurgitation and the ordinary effects of the primary lesion, both upon the other parts of the heart and the system at large, were all present. The only remarkable symptom in this case was the rapidity of the pulse, which at times exceeded anything I have ever known in an adult. It is impossible to imagine a case which would illustrate more perfectly the value of digitalis in cases where the muscular walls of the ventricles are overstrained and contract feebly and frequently. Clinical experience and physiological experiment have at last definitely settled that the first and most important action of digitalis upon the heart is to increase its power of contraction. In cases like the present, therefore, where an overwhelming strain is brought upon the ventricles of the heart, under which their walls are yielding, this drug may be used fearlessly and freely. Under its action the pulse will become slower, fuller, and stronger, and the most alarming symptoms of disturbance of the circulation will subside. The amount to be given daily must depend solely upon its influence upon the heart. I rarely give more at first in any case than ten drops of a good, reliable tincture every five hours, and, if necessary, increase it gradually to every two hours; and in very few suitable cases will this fail to afford very great relief. It is true that in diseases of the aortic valves sudden death is especially liable to occur; and this tendency is strikingly illustrated by the present case. Formerly a great deal was said about the danger of using digitalis freely or for a long time, for fear of its finally producing serious or fatal depression of the circulation by its cumulative action. It is certainly true that when pushed beyond the limits of safety, and especially when given in unsuitable cases, digitalis produces dangerous depression of the circulation. Even in such cases, however, there is generally warning of the approach of danger. But in cases where its use is markedly indicated, I have never seen injurious effects from the administration, under careful watching, of ten drops of the tincture every four, three, or even two hours, until slowing of the pulse begins to be noticed, when the frequency of the dose should immediately be reduced. In the case now reported it not only produced no disagreeable effect, but it is quite certain that on repeated occasions attacks so severe that they would have proved fatal unless promptly relieved, yielded readily and safely to its action.

## ORIGINAL COMMUNICATIONS.

### PATHOLOGICAL DENTITION.

BY JAMES W. WHITE, M.D.

DENTITION, though a physiological process, is nevertheless recognized as a frequent cause of constitutional disturbance. Doubtless there are extremists who overestimate the average influence of this process as a disturbing element, as there are those who underrate the difficulties which may attend it. Pathological dentition is by many considered a secondary affection,—a single link in a chain of deranged actions,—and, even when a little patient indicates unmistakably the local irritation, relief is sought by general medication,—relaxants, derivatives, calmatives, febrifuges, etc.; then by local emollients, fomentations, and anodynes; and lastly, if at all, by lancing the gums, when redness, tumefaction, induration, or the whiteness of the coming tooth seems to demand it. These signs are indeed assumed to be the only possible justification of the operation. If the gums are tumid, tense, and shining, swollen up into a kind of little tumor over a particular tooth; if an unhealthy ulceration with a sloughy appearance forms upon the summit of the gum; then, say our text-books and writers upon the diseases of infancy,—*then* we may sometimes resort to incision of the gum.

"In forming a diagnosis," says one of the highest authorities, "whether a disease present during the time of teething is consequent upon some derangement of this process, or upon an abnormal condition of some other organ or organs of which the dental difficulty is but itself a symptom, the state of the jaws must be the principal guide. If, in the presence of symptoms which might arise from teething, we find that the teeth are not pressing forward towards the surface of the gums, and that the latter maintain their normal appearance, it will be useless to have recourse to the gum lancet." Young practitioners are cautioned, by a recent writer, not to display their ignorance by the use of the lancet, except the *local* indications imperatively demand it. The local signs, it is to be inferred, are tumefaction, redness, induration, ulceration, and the whiteness of the presenting tooth. The direct pressure upon the fibrous tissue is thus assumed to be the cause of the various and serious complications which are too frequently associated with the period of the primary dentition. It is doubtless true that a hyperæmic condition of the gums may be caused by the growth or eruption of the teeth proceeding more rapidly than does the absorption of their integumental covering, and that the undue pressure thus caused may occasion trouble, by the irritation of the nerves of the gum-tissues,—manifested locally by tumefaction, soreness, redness, or ulceration; systemically, by fever, irritability, sleeplessness, etc. It is also admitted that judicious treatment of pathological dentition should in all cases include hygienic care, and that constitutional medical, as well as local surgical, interference is generally demanded. Nor is it claimed that in the perversion of this physiological process is to be found an explanation of all the ills to which human infancy is heir; but we assume that pain so intense and unremitting as to destroy the appetite for food, to cause wakefulness, irritability, thirst, fever, diarrhœa or constipation, congestion, convulsions, and death, may be due to the irritation of dentition *without the existence of a single local indication.* In other words, that the most serious complications of dentition are not caused by the pressure of the advancing tooth upon the gums, but by the backward pressure of the resisting gums upon the developing and sensitive *pulp*, giving rise to a true toothache, comparable only to that exquisite torture which is experienced in after-life from an exposed and irritated pulp.

If such a condition of things is possible, it will readily be seen that there can be no question as to the extent of the mischief which may result. The association of the fifth pair of nerves, which supplies the dental filaments, with the great sympathetic so connects the teeth with the entire economy that the pathological bearings of such deranged action may not be limited. That such a condition may exist will be readily understood, if it is remembered that at the period of eruption the roots of the teeth are as yet incomplete; that instead of the conical termination and minute foramen which characterize perfected teeth, the aperture is quite large, and its edges thin and sharp. In estimating, therefore, the amount of constitutional disturbance which may result because of a want of accordance between the eruption of a tooth and the absorption of the superimposed tissues which impede it, we may imagine the sensitive pulp, made up of arteries, veins, and nerves, in a condition of irritation from augmented vascular and nervous action,—a morbid activity of the process of dentition,—followed by determination, stasis, and congestion, producing a hyperæmia sufficient to cause the protrusion of the mass from the incomplete aperture of the root; which, being pressed upon by its thin, sharp edges, is sufficient cause for any amount of constitutional disturbance of which it is possible to conceive.

Under such circumstances it is not difficult to comprehend the inefficacy of any or all hygienic measures; of relaxants and febrifuges; of local emollients and anodynes. It is also easy to understand how the thorough lancing of the gums, over the tooth or teeth thus situated, may, by removal of the pressure, give a relief so immediate and complete that there shall be no room for doubt as to the correctness of the diagnosis.

The *general* indications of what may not inaptly be termed infantile odontalgia are precisely what might *a priori* be expected. The child, at first simply uneasy, becomes by rapid stages fretful, troublesome, peevish, cross, vindictive; cries persistently, or stops crying only to scream; or, if quiet for an instant, will be found to have its thumb or fingers thrust between the jaws, the chewing upon which seems to afford a momentary cessation of anguish, but only momentary. It refuses food, throws down its toys if handed to it, as though in a passion, and is outraged by any attempt to amuse

it. To these persistent unmistakable evidences of irritability are added a flushed face, corrugated brow, compressed lip, intolerance of light, and disturbed, broken sleep, the desire and effort to sleep seeming to be thwarted by fresh accessions of pain, until the little one sinks exhausted into a troubled slumber, but of short duration. Concomitant with these manifestations, or quickly succeeding them, will be some of the various systemic complications, too frequently with fatal ending, and still *no local indication* of the trouble which is consuming the young life.

A case recently under the care of the writer afforded a marked confirmation of these views. A child one year of age, with the four superior and two inferior incisors in position, after three weeks of restlessness, wakefulness, loss of appetite, fever, paroxysms of pain, and rapid emaciation,—all without obvious cause, certainly without the slightest local indication of trouble in the mouth,—was *cured* by free crucial incisions over the molar teeth, the improvement being so evidently the result of the operation that the relation of cause and effect was plainly recognized by every member of the family.

Such cases are not exceptional, and suggest a more careful investigation of the developmental processes of dentition in otherwise unexplainable diseases of infancy.

## NOTES OF HOSPITAL PRACTICE.

### PENNSYLVANIA HOSPITAL.

*SERVICE OF DR. R. J. LEVIS.*

Reported by JOHN B. ROBERTS.

*ANEURISM OF THE SUBCLAVIAN ARTERY.*

JAMES M., aged 41 years, was admitted with a large aneurism of the right subclavian artery, which has been recognized only about three weeks previously to his applying at the hospital for treatment. It has evidently existed much longer, however, for he has complained of pain in the right chest and down the arm for nine months, and the clubbed fingers of the right hand show conclusively that the tumor has acted for a long time as an impediment to the return of venous blood.

A pulsating tumor, with distinct aneurismal thrill, is seen jutting above the clavicle, and below that bone another swelling is felt, in which the thrill, however, is almost absent. It is difficult to determine whether this lower tumor, below the clavicle, is a portion of a large aneurismal sac bulging out between the first and second ribs, or a dilatation in the continuity of the vessel as it becomes axillary, after it has passed under the clavicle; in other words, whether the aneurism is entirely subclavian and intra-thoracic, or involves the subclavian and its axillary continuation. The aneurism certainly includes the entire subclavian artery, and probably a portion of the axillary, but how far it extends towards the heart is uncertain, for there may be some dilatation of the innominate, although the primitive carotid seems to be normal.

Aneurisms, when not traumatic, are the result, usually, of atheromatous change in the arterial coats, which so interferes with the contractility and nutrition of the vessel that atrophy takes place. The weakened coats are then dilated by the constant pressure of the blood, until an aneurismal sac is formed, or rupture takes place from a sudden increase of intravascular tension by excessive emotion or severe exertion. In the treatment of aneurism it is of great importance to consider the extent to which this process has advanced; for the surgeon must be influenced in the choice of operative procedures by the condition of the coats of the artery.

The cure of aneurism depends on the formation of a clot in the sac by deposition of fibrin from the blood; and accordingly many methods have been suggested to produce this result. One of the oldest plans of treatment is ligation, by which the current blood is arrested and an opportunity given for lamination of fibrin to fill up the cavity of the sac.

The ligature may be applied upon the vessel far above the tumor, as first performed by Hunter, or below it, as in the distal operation suggested by Brasdor; in either of which cases it is necessary to select, as certainly as possible, a portion of the vessel free from disease.

In this patient the Hunterian operation is impracticable, for, as the tumor involves the entire subclavian, the ligature would have to be placed around the innominate artery, which lies deep in the neck behind the upper bone of the sternum, and has large venous surroundings. A most important objection, moreover, is the fact that the innominate is so short and gives off such large branches that there is not room for a firm clot to form, as was shown in the only successful ligation of this artery, where the additional ligation of the vertebral was necessitated.

The distal operation upon the axillary is, therefore, the one to be adopted in this case, if it be decided to trust to ligation; but an objection is that should the vessel be atheromatous, and secondary hemorrhage supervene, there would remain no point higher up to which a ligature might be applied. The ligation of the carotid also would probably be required, for the aneurism extends so near to the bifurcation of the innominate into the subclavian and the carotid that the current in the latter would interfere with fibrinous deposition in the sac.

Partial and complete compression have also been resorted to for the cure of aneurism, depending for their efficacy in diminishing or entirely arresting the circulation and allowing a deposit of fibrin.

In a case of internal iliac aneurism in the hospital, Dr. Levis succeeded in effecting cure by *complete* or rapid compression upon the cardiac side of the tumor for five hours and twenty-five minutes. This plan has of late become quite popular, being particularly adapted to treatment of aneurism of the abdominal aorta and other large arteries, for it produces complete stasis of the blood, and, if anæsthesia be kept up, is unattended with great suffering.

As spontaneous coagulation occasionally takes place in the dilatation, attempts have been made to accomplish this by the injection subcutaneously into the sac of tannic acid, subsulphate of iron, and other astringent solutions. These efforts have been attended with at least some degree of success; but the clot generally sets up a high inflammation by acting as a foreign body. Many other methods have been tried, among which may be mentioned violent manipulation of the tumor in order to detach the fibrinous laminæ usually adherent to the inner walls of the sac, so that some of the detached material may plug up the distal extremity of the aneurism and stop the current of blood.

It has occurred to Dr. Levis that coagulation might be induced by introducing into the cavity of the aneurism, through a capillary tube, a number of horse-hairs

one after the other, which, by acting as remoræ on the blood passing through them, would entangle upon them a large quantity of fibrin; and it is his intention to attempt the radical cure of aneurism of the great arterial trunks of the thorax and abdomen by this means in cases which are not amenable to treatment by the usual operative methods of ligature or compression.

This subclavian aneurism is perceptibly increasing, and it will continue to dilate until it bursts into the pleural cavity, the trachea, the œsophagus, or the subclavian vein, if not soon successfully treated; but at present nothing will be done, except to place the man on a good *nitrogenous* diet, in order to increase, if possible, the quantity of fibrin in the blood; and to tranquillize the circulation by digitalis and the recumbent position.

In the mean time the most careful physical exploration of the extent of the aneurism and its possible complications will be made, and serious consideration given to means for relief from a condition in which, sooner or later, a fatal termination must otherwise be expected.

## CASES OF OVARIOTOMY.

BY WASHINGTON L. ATLEE, M.D.,

Of Philadelphia.

Reported by J. Ewing Mears, M.D., of Philadelphia.

*Case 246.—Multilocular ovarian tumor—Incision five inches in length—Slight parietal adhesions—Recovery.*

December 13, 1871, Dr. Atlee visited Miss E. B., of Schenectady, New York, in consultation with Dr. A. M. Vedder. The patient was 46 years of age, a teacher by profession, and, until October, 1871, had enjoyed general good health. Menstruation began at the age of sixteen, and has, at times, been irregular and excessive. In August, 1871, she noticed that her dresses were getting tight, and she suffered somewhat from dyspnœa; œdema of the lower extremities was also present.

Previous to the time when Dr. Vedder took charge of the patient, she had been treated with drastic purgatives, and had been rigidly confined to bed.

On examination, Dr. Atlee found the abdomen as large as is usual at full term of pregnancy, and quite uniform in shape. There was resonance on percussion over the right lumbar region and the upper border of the abdomen; at all other points dulness on percussion was marked. The abdomen was tense; several hard masses could be felt on palpation, occupying chiefly the umbilical and left lumbar regions. Fluctuation was imperfect, being more distinct in the right lumbar region. The pelvis was free, the uterus was central in position, and the cervix was normal. The sound could not be introduced; the tumor could not be moved by deep inspirations. The diagnosis of multilocular tumor of the left ovary, with parietal adhesions, was made.

Ovariotomy was performed, the following gentlemen being present: Drs. A. M. Vedder, J. D. Jones, R. M. Fuller, M. G. Plank, B. N. Myndevre, Pease, Niles, and F. Ellwood, of Schenectady, and G. S. Beckwith, of Charleston, N.Y.

The tumor involved the left ovary, was multilocular in character, and was attached to the anterior wall of the abdomen by adhesions which were easily detached. The pedicle was of good length, and was secured by a three-quarter inch Atlee clamp. The patient made a very satisfactory recovery, although she suffered from bedsores which resulted from long confinement in bed in one position previous to the operation.

# TRANSLATIONS.

## TRACHEOTOMY BY THE ACTUAL CAUTERY.

By MM. F. de Ranse and Muron. Translated from the *Gazette Médicale*, No. 38,

BY GEORGE S. GERHARD, M.D.

THE interest with which we listened to the subject of tracheotomy by the actual cautery, communicated to the Société de Médecine by M. de Saint-Germain, led us to institute some experiments, the results of which we are now able to record. The object of employing the actual cautery in tracheotomy is to prevent hemorrhage, and thus to do away with one of the principal difficulties with which the surgeon has to contend.

There are a certain number of cases in which hemorrhage occurs on the first incision to such an extent as to mask and render more delicate the subsequent steps of the operation.

The actual cautery is simply a substitute for the galvano-cautery, which has been employed by M. Verneuil in tracheotomy. The priority of performing the operation, therefore, belongs to the eminent professor; and if we prefer the actual cautery to the galvano-cautery it is because the latter is not in the hands of every surgeon.

We think that the actual cautery, by preventing hemorrhage, will render the operation of tracheotomy more simple, and that a physician who formerly recoiled from its performance will now no longer hesitate to attempt it.

For these reasons we propose to give in detail the different steps of the operation as we performed it upon animals (dogs).

The first question which presents itself concerns the choice of instruments. At first we employed an ordinary table-knife with a rounded end; but afterwards we had a very small instrument made by Mr. Cohn, which divided the tissues only so far down as the trachea. A table-knife is undoubtedly the most practicable, because it is so easily obtained; the only objection to it is that its extremity is sometimes so thin that the skin and cellular tissue are divided too slowly, and the former as a consequence becomes cauterized to an unnecessary extent. If, however, a knife with a stout extremity be selected, an immediate division of the tissues will be effected without cauterizing the skin beyond the cut.

To completely divide the tissues as far down as the trachea, two table-knives are generally sufficient; but, in order to be prepared for any accident that may happen, we think it prudent to be furnished with three or four.

The extremity of the knife, having been heated bright red to an extent of two centimetres, should be applied firmly to the skin at a point one centimetre below the cricoid cartilage, and held steadily, lest too large a wound be made.

The instrument we prefer consists of a flattened elliptical piece of iron supported by a handle seven or eight centimetres long; the latter has a roughened extremity, so that it may be tightly held by a pair of forceps. The cautery is irregularly elliptical, one end being larger than the other, and is, therefore, readily adapted to the age of the patient. The cautery, having been heated bright red, is firmly held by a pair of forceps, and when the patient's head has been extended the larger end of the instrument is applied to the skin at the point before indicated, below the cricoid cartilage. It is important to stretch the tissues at the moment of the application, in order to facilitate their section. The skin and the subcutaneous cellular tissue are thus rapidly divided.

Separating the edges of the wound with a pair of ordinarily strong forceps, and returning the cautery, which has cooled considerably, the aponeurosis and all other tissues are divided, and the trachea is brought to view. So soon as the trachea is exposed, we think it advisable to withdraw the cautery, for fear of denuding the cartilages and causing necrosis.

Separating the divided tissues with the same pair of forceps, the trachea is divided with a bistoury. The edges of the tracheal wound are separated by means of a Laborde dilator, along the inferior branch of which a canula is readily made to pass. We heat the cautery to a cherry-red color because the skin and the cellular tissue are thereby more rapidly divided,—a result which is not attended by any bad consequences, because the vessels of these tissues are not large enough to give rise to hemorrhage. During the first step of the operation the cautery cools, and when the more deeply-seated tissues are about to be divided the obliteration of the vessels is certain.

We stated at the commencement that the object of the operation by the actual cautery was to prevent hemorrhage; let us see if this end is always attained. In twenty-two operations upon dogs, hemorrhage occurred but twice; in all other instances the tissues were perfectly dry, and at the bottom of the wound the trachea could be distinctly seen. The slight hemorrhage that occurred in two cases was due to our attempting to divide too great an amount of tissue with the same part of the instrument; the vessels were divided, but the cautery was not hot enough to obliterate them completely. An important point to be borne in mind, after dividing the skin and the cellular tissue, is to employ the smaller and thicker end of the instrument in dividing the more deeply-seated tissues. In no instance, when this precaution was taken, did hemorrage occur.

In addition to the complication from hemorrhage, which, as we have already stated, is easily prevented, we ought to mention another, consisting in a partial necrosis of one or two cartilages of the trachea and causing eventually slight stricture. The danger of the occurrence of necrosis may be easily avoided. The cautery divides all that it encounters: when it reaches the trachea it meets with a certain resistance, but the perichondrium may be destroyed, and as a consequence a disturbance of nutrition occurs, resulting in partial necrosis. As we have already stated, we should, so soon as the trachea is exposed, withdraw the instrument and employ the bistoury.

## RESEARCHES ON PSEUDO-HYPERTROPHIC MUSCULAR PARALYSIS.

By Berger (*Deutsches Arch. für klin. Med.*, 1872, Bd. ix., Heft 4, 5). Translated from *Archives Générales de Médecine*, Août, 1873,

BY ENRIQUE M. ESTRAZULAS, M.D.

In the cases of this disease studied by Berger, new features are added to the train of symptoms usually recognized as belonging to it, and consisting of various troubles of sensibility. These troubles are of hyperæsthesia and anæsthesia relating to the various modes of sensibility,—tact, thermæsthesia, pain. He maintains that the disease always begins in the lower extremities, being generally accompanied by violent neuralgic pains and formication in the affected muscles. Later this gives place to anæsthesia. Also, he has found that fibrillar contractions are of constant occurrence.

The enlargement of the paralyzed muscles is, according to Duchenne, due to hypertrophy of the interstitial connective tissue, the muscular fibre remaining normal, or becoming atrophied afterwards by the compression exerted by the hyperplasia of connective tissue.

In two cases where the author had an opportunity of examining the muscles microscopically, he found a complete absence of proliferation and of fatty degeneration in the interstitial connective tissue, and a true hypertrophy of the muscular fibril,—hypertrophy so developed as to account by itself alone for the development and enlargement of the limb.

The author is far from denying the correctness of Duchenne's microscopical researches, but he thinks that the latter has observed the disease at different periods from himself. Berger has studied it at the beginning, and found a true hypertrophy of the muscular fibril, and later (and here he agrees with Duchenne's observations) the connective tissue begins to proliferate and in turn hypertrophies, thus compressing the muscular fibre and occasioning its atrophy.

There are, then, two anatomical stages to be recognized in the disease,—the first characterized by a true muscular hypertrophy, and the second by a hypertrophy of the interstitial connective tissue and the subsequent atrophy of the muscular substance. The first stage is clinically marked by neuralgia, hyperæsthesia, and anæsthesia, and afterwards feebleness, but not abolition of motility; the second, by true paralysis, in company with considerable increased volume of the affected muscle.

The author then reviews the different hypotheses that have been advanced in regard to the nature of the disease. Duchenne attributes it to a paralysis of the vaso-motor nerves; Stofella, to a cerebral lesion; Gnesinger, to a primitive muscular lesion; but according to Berger the muscular alteration is not due to a trouble of the vaso-motor nerves, but to a trouble of the trophic nerves. The trophic nerves destined to a muscle appear not to follow the track of the motor nerves, but that of the sensitive ones, and hence the frequency of troubles of sensibility accompanying the trophic lesions of the muscles.

The trophic nerves probably act as moderators of the nutrition of elements, since their destruction is followed by an irregular and exaggerated hypertrophy of the elements they supply, and the atrophy only comes later after a lapse of time more or less long. In conclusion, Berger believes himself authorized to place the pseudo-hypertrophic paralysis among the muscular tropho-neuroses.

## DEATH FOLLOWING THE EMPLOYMENT OF THE STOMACH-PUMP.

Translated from the *Gazette Hebdomadaire*, September 26, 1873,

BY GEORGE S. GERHARD, M.D.

An inquest was made on the 21st inst. on the body of a man fifty years of age. It appears that the deceased, who had been intemperate, was in the habit of taking every day an ounce of tincture of rhubarb as a stimulant. At seven o'clock on the morning of the 16th of August he went to the apothecary for his accustomed dose, but after having swallowed it he observed that it had an unusual taste. The apothecary, finding that he had given laudanum to the patient instead of tincture of rhubarb, at once administered an emetic dose of sulphate of zinc. One physician who was summoned gave three pints of warm water, and another proceeded to the use of the stomach-pump, but the tube first employed was too large, and a smaller one also failed to pass. Ten grains of sulphate of zinc were administered, with the effect of producing copious vomiting, but the patient died three days afterwards, without having presented a single symptom of narcotic poisoning. He complained of pain in the throat, and was unable to swallow. At the autopsy there was found a

stricture of the œsophagus, probably of a malignant nature, which explained why the tube failed to pass. Above the seat of stricture the œsophageal wall, which was very thin at this point, was found to have been perforated by the tube. The patient, before the accident, had not presented any symptoms of stricture of the œsophagus. The jury exonerated the two physicians from all blame, and rendered a verdict of accidental death; they considered the druggist, however, as meriting grave censure.

We think that the case in point should not be brought up as an argument against the use of the stomach-pump when it seems to be clearly indicated. No one would think of employing the instrument when a stricture of the œsophagus was known to exist.

The case should teach us to be on our guard when we are using this instrument in cases of poisoning. We, however, believe that the unexpected discovery of a stricture of the œsophagus in one who has been poisoned is of as rare occurrence as the indication for the emptying of the stomach by means of the pump; for, according to our experience, there have been but few lives saved by the operation.

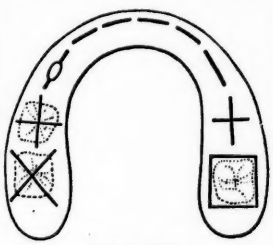
## ELIMINATION OF MERCURY.

DRS. MAYENÇON and Bergeret, in a study of the action of mercury (*Journal de l'Anatomie*), found that when one centigramme of the bichloride was injected hypodermically into a dog the metal was to be found in the urine during the following twenty-four hours; when a centigramme was administered during ten or twelve days, the urine contained mercury during the whole time and for four or five days afterwards. They failed to find it in the saliva but did detect it in the spermatic fluid of an embosser. In a ptyalized nursing woman the milk contained as much as the saliva; and the authors detected the drug in the urine of a baby fed at the breast of a mercurialized female.

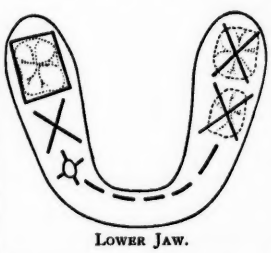
In a second series of experiments, rabbits were killed at various intervals after the injection of a solution of the bichloride, and their tissues examined. It was found that in half an hour the drug had permeated everywhere, but was most abundant in the liver and kidneys. In four days the mercury given in a single dose was all eliminated, and could not be found in the tissues. By the continuous use of the metal it certainly accumulates and remains in the system. Thus, neither the urine nor the blood of one of the investigators contained any of the metal forty-eight hours after the cessation of a mercurial course. Yet, on taking iodide of potassium, mercury reappeared in the urine, and continued to be present for forty-eight hours.

LANCING THE GUMS (*The Dental Cosmos*, February and March, 1873).—Dr. J. Foster Flagg gives the following practical directions for an operation which is too often imperfectly and unskilfully performed. Until recently it has been thought sufficient to make a single straight incision over the coming tooth, and in many instances the mucous membrane has merely been scratched with the point of the lancet; there has been no relief of tension and inflammation, and in not a few cases the result has been fatal.

In making an examination of the gums of an infant over ten months old, the finger should be introduced at the front of the mouth, as thus, the centrals, and usually the laterals also, being fully erupted, all contact with tenderness is avoided. Under the age of ten months the corner of the mouth should be selected. The lancet should be wrapped with a piece of tape, beginning about a quarter of an inch from the point, and covering the remainder of the blade and a portion of the handle, securing it by slipping the end of the tape under the last turn and drawing it tight. This having been done, that portion of the gum which covers the irritating tooth should be taken gently between the first two fingers of the left hand, the thumb steadying the jaw by resting under the chin or upon the cheek, as thus, in any part of the mouth, the tongue, lips, and cheeks are protected. The incision should be made slowly, steadily, carefully, and gently, passing through the gum until the enamel of the coming tooth is felt, but *only felt*, as this tissue is yet not so hard but that it might possibly be injured by undue force in cutting.



UPPER JAW.



LOWER JAW.

In lancing for the centrals and laterals of both upper and lower jaws, the incisions should be made nearly over the cutting edges of those teeth, but, while the cuts in the upper jaw should be made rather exteriorly to the centre of the alveolar ridge, those of the lower jaw should be made inside of the centre. The single cut over the cutting edge removes, practically, all impediment to complete eruption, for as the teeth become thicker in one direction they become narrower in the other. The object in lancing a little externally above and a little internally below is to offer pathways to the teeth, which shall tend to favor the production of the normal occlusion by guiding the upper teeth outwardly and the lower ones inwardly.

The first molars (twelve-months teeth) should always be lanced with cervical incisions at least; but a more decided difference exists between those of the upper jaw and those of the lower than between any of the other teeth thus compared. In the upper jaw the cervical incision, as delineated in the diagram, relieves tension over the most prominent points of these teeth,—the buccal and palatal cusps,—while in the corresponding teeth of the lower jaw we should employ the crucial incision, thus, X, because in this way we reach their most prominent points,—the two mesial and two distal cusps.

FOREIGN BODY IN THE ŒSOPHAGUS (*New York Medical Review*, September, 1873).—Dr. D. E. Smith relates the case of a young married woman, who, during an attack of puerperal convulsions, swallowed a partial set of false teeth, four in number, and fastened with a gold clasp. They remained for three days in the pharynx, which was not examined by the attending physician, who declared it to be impossible that the teeth could have been swallowed. At the end of this time, her ingesta having in the mean while been completely fluid, she ate a small piece of beef-steak, in company with which the teeth passed down the œsophagus to a point near the cardiac orifice, where they were arrested by the hook of the clasp penetrating the œsophageal wall. The patient remained in this condition for three months, gradually growing weaker, and undergoing treatment for indigestion, general debility, incipient phthisis, etc., her physician persistently denying the presence of the teeth. A post-mortem examination disclosed the facts to be as above related.

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## EDITORIAL.

### ETHER AS AN ANÆSTHETIC.

SOME years since, a friend of ours, when on a visit to an English homestead, as he went to dinner was amused by seeing the children peering at him from behind the door, and by hearing one of them say, "Why, he ain't black!" We had thought this unconsciousness of the existence of America—this purposed ignorance of it and its people—had been battered down by the events of our late war and by our achievements in the arts and sciences. But a London fog is a hard thing to get light through; and in a recent article in the *Edinburgh Medical Journal* Dr. Charles Kidd does battle for the rights of chloroform in a manner worthy of the former time and of his ancient namesake of buccaneering fame. "*One or two* Americans," he tells us, "have, with an allowable national pride, set up ether as the one thing necessary to save all medical men from ruin; they would abolish chloroform by special act of Parliament, and, as done in America, expel any surgeon from an hospital who would use chloroform in place of the American anæsthetic."

Again he informs us, "To help out this weak agitation, it is shown that, by some American specialty, ether is far preferable; and to men who are ready to advertise the specialty of some American hair-wash, some sewing-machine, or substitute for tea, that chloroform is terribly homicidal, and with an apparatus special, ether, as in America, for what they know, has not had one death; and in France, at Lyons, the same magic halo of perfect safety has surrounded it: both these latter statements are altogether misleading and erroneous."

Let us, in the first place, assure Dr. Kidd that it is not one or two physicians, but the great bulk of the American profession who stamp the indiscriminate anæsthetic use of chloroform as homicidal; and let us say to him also that, if good taste do not lead him to speak respectfully of his transatlantic brethren, a care for his own reputation ought to induce him to pay some attention to the habits of even such a wild animal as an American before he comments upon them in print and writes such nonsense as that a hospital surgeon would be expelled here for using chloroform. The doctor seems, however, to set little store by his reputation, for he is as reckless in regard to the construction of his sentences and the truth of his asserted facts as to the canons of good taste. The last sentence we have quoted will serve as an example of the preciseness of his style: we leave it to our readers if they can form any idea as to what is meant by ether being "far preferable by some American specialty."

As an example of his scrupulous care in regard to the accuracy of his statements may be cited the following sentence: "The well-known seven deaths at Lyons, and forty-one of the Boston committee, all from ether, are, from insufficient knowledge, forgotten or misrepresented." The real truth is that the Boston committee reported that forty-one deaths had been *attributed* to ether, but that in many of them to lay the credit of the fatal result to the anæsthetic was simply absurd, and that there was "no recorded case of death known to the committee, attributed to sulphuric ether, which cannot be explained on some other ground equally plausible, or in which, if it were possible to repeat the experiment, insensibility could not have been produced and death avoided."

As the death-roll of chloroform—shall we say?—murders grows day by day,—as even English coroners and English magistrates are becoming restive under the slaughter of the people,—as doctor after doctor, having claimed that his method of using chloroform was safe, is forced to own by bitter experience that he is not, after all, so much more skilful than his fellows,—as these things are so, it seems to us strange that any one should still come forward and practically say, "I hold the giant powers of chloroform for evil, as it were, in the hollow of my hand. Its fatal spirit is bound at my bidding; no death shall occur when I direct."

In view of the various events in the history of chloroform, which must be in the memory of all

our readers, it seems to us nonsense to assert that deaths from it can be avoided by *any* precautions or by *any* skill. The great difference between the two anæsthetics lies in the circumstance that chloroform kills suddenly, unexpectedly, and unpreventably, whilst the ether death is a slow one, and can be avoided, unless in the very rarest of instances. The unrecorded, unnumbered dead from chloroform, our experience leads us to think, are a much greater multitude than is commonly believed. So far as we know, no case of death from chloroform occurring in this city has been recorded; yet we have known of the occurrence of several within a comparatively short time.

## A NEW OPERATION FOR ANEURISM.

ON Monday, October 13, Dr. R. J. Levis performed, at the Pennsylvania Hospital, an operation so novel in its conception, so plausible in its theory, and, if it turn out successful, so important in its power of saving life, that it seems worthy of editorial notice. The case was one of subclavian aneurism, involving, it is believed at least to the extent of dilatation, the innominate. Tying the artery has been thought by the surgeons who have examined the case to be of more than doubtful expediency, and Dr. Levis has carried out a procedure which he tells us has long been in his mind. As every one knows, the late Charles H. Moore, surgeon to the Middlesex Hospital, conceived and put into execution the idea of introducing fine iron wire into aneurisms, to afford a nucleus about which clots should form. His practice has been followed in two cases, by Dr. Donville and Mr. Murray, both English surgeons. If we remember aright, in each of these instances the aorta was the artery involved, and the result was unfavorable.

Dr. Levis's idea consists in the use of horse-hair, with the belief or expectation that it will offer sufficient obstacle to the blood-current to cause coagulation, and at the same time, being animal in its nature and not apt to undergo rapid decomposition, like the catgut ligature will cause no irritation and not give rise to suppuration.

The horse-hair was introduced through a fine sharp needle canula, which was plunged into the sac. No difficulty was experienced in its introduction, and twenty-four feet nine inches of it were safely stowed away in the aneurism. In all probability this mass was driven in great part into the distal portion of the aneurism by the blood-current. Be this as it may, a marked diminution in the force of the pulsation of the aneurism and of the pulse of the wrist was at once induced. This has increased since the operation, the tumor has also gained greatly in solidity, the pain has lessened very much, and no unfavorable symptoms have resulted. As, on the other hand, the radial pulse and the aneurismal throb have never disappeared entirely, and as the dangers of suppuration of the sac are not yet past, it is too early to predict the result.

# LEADING ARTICLES.

## DYSIDROSIS—RETENTION OF SWEAT.

DR. TILBURY FOX, of London, gives a clinical lecture in the *British Medical Journal* for September 27, 1873, which seems to illustrate clearly the disease which he has recently described under the name of dysidrosis.

The patient was a woman, 36 years of age, and in poor health. Both hands, forearms, and arms were affected with the cutaneous disease. Dr. Fox describes the condition as follows:

"There are scattered papules, which, on close examination, are seen to be in reality vesicles; and also very distinct vesicles, of the size of millet-seeds, some of them having a red base, and in some cases being crowded together in little groups, more or less scattered all over the backs and sides of the fingers, and the back and front of the hand, and the whole forearm (back and front), and the arm up to the shoulder, especially its inner aspect. In some cases the vesicles have run together, so as to form minute bullæ; on pricking these bullæ, a drop of very clear fluid exudes, and it is alkaline. Between the fingers the cuticle is in some cases raised slightly by a layer of fluid beneath. It is white and macerated, especially at the web of the fingers; and the fluid is faintly acid; it is also offensive. There are no crusts anywhere. On the palmar aspect there are scattered, isolated vesicles about the fingers, and towards their tips a number of minute transparent points, resembling sago-grains, are visible under the skin,—some thirty or more. These points are not raised, but are seen through the cuticle, and are clearly sweat-follicles distended with sweat. The front of the arm appears as if it were the seat of diffused eczema. The fluid contained in the vesicles remains perfectly clear until it dries away or escapes, when the cuticle shrivels and peels off or macerates. The patient complains greatly of a burning about the eruption."

Dr. Fox remarks that the affection should not be

confounded with acute eczema, erythema papulatum, miliaria, sudamina, or hydroa. Local treatment is of little avail, except to moderate the irritability and inflammation of the skin. Diuretics and tonics are to be relied upon. Dr. Fox adds,—

"I have termed the disease dysidrosis, because nature seems to have a difficulty in getting rid of the secreted sweat, which remains to distend the follicles and to macerate the tissues. The disease is nothing more than retention of sweat, and its results. Dysidrosis bears the same relation to the sweat-glands that acne does to the sebaceous glands."

L. A. D.

## REVIEWS AND BOOK NOTICES.

A System of Midwifery: including the Diseases of Pregnancy and the Puerperal State. By William Leishman, M.D.

The author's object in this work, he tells us, is "to furnish to students and practitioners a complete system of midwifery of the present day." The need of such a book, we are informed in the preface, is great, since "in our language scarcely a modern work exists which can be compared with those of Cazeaux and Scanzoni." To this statement we might more readily assent were the magnificent volume of the late Professor Hodge written in a foreign tongue; but, as it exists in our own, it fills, to-day, as completely its place as a text-book of obstetrics as any text-book extant in any of the allied branches of medical science. Whether the work of Professor Leishman be worthy of a similar high rank we will now consider.

First, as to the author's qualifications for the task, we have, quoting still from the preface, the statement that "there are few modern works of approved merit, whether British or foreign, with which the author has not made himself familiar." This claim a perusal of the work proves true. It would be almost impossible to expect familiarity with all the medical ephemera and fugitive literature which to-day meet the eye at every turn, but we can safely say that we know not where in any system of obstetrics to find a compendium so full and so entirely up to the knowledge of the day. The author has added to research the attraction of a singularly graceful and easy style, a clear manner and method, good illustrations, and excellent typography. The illustrations are more than good,—they are remarkably good and pertinent. Especially would we commend those illustrating the position of the head in the different stages of delivery, as on page 327. The wood-cuts, generally, are fresh, and, though at times familiar, are acknowledged; and to borrow another author's illustration with courtesy is rather to honor him than the reverse. The work is in one volume—eight hundred and thirty-five pages quarto; containing forty-five chapters, over one hundred and seventy wood-cuts, and a good index. An enumeration of its table of contents would alone give a correct idea of its fulness and completeness. Purposely, the statistical element has been omitted, and, we think, wisely. While occasionally the views of the author do not coincide with those of many, he can rarely be convicted of ignorance of anything concerning his subject. His description of the mechanism of natural labor is wonderfully clear, though his enumerated positions of the fœtus are at variance with those generally taught in this country, and those of many continental writers.

They are the four of Naegele, all in the oblique diameters, ignoring the four additional positions in the antero-posterior and transverse. His description of mechanism varies from the commonly taught doctrine. We see no reason to doubt its accuracy, and none at all its intelligibility. He urges the very great importance to the practitioner of early acquiring the tactus eruditus, saying only too truly that where not *early* learned it is often *never* learned; and his directions for making a diagnosis of the position of the head strike us as superior to any we have ever read or heard, so easily remembered and simple are they.

The author discards support of the perineum, and retains the binder, to support the relaxed abdomen and uterus and to preserve the figure, though he does not give as a reason for its use the very important one were all other reasons wanting,—viz., the feeling of comfort which it gives to almost every lying-in woman.

Occasionally the author is funny, as on page 309, where, in speaking of the termination of natural labor, he says, "A single glass of sherry or claret with water may be allowed; but it is truly astonishing how seldom this is necessary." When we think of the condition of parturients in certain sections of our favored land where total abstinence is enforced, we are thankful that it is so, but by no means so astonished as our author.

The author's chapters on the forceps (page 515) are inferior to most of the work, though he evidently has no suspicion of it himself. They may mark an advance in British instrumental delivery, but as a system of teaching they are not equal to our own. Beginning with a history of the invention and describing varieties of the instrument, he gives the indications for its use, and directions for the application of the blades. His personal predilection is for a straight forceps, made somewhat longer than the ordinary straight forceps, being nine inches from the lock to the tips of the blades. These, which are described in the text as straight, are figured in the wood-cut illustrating their application with a decided pelvic curve, probably out of deference to the views of those who object to the straight instrument, and are considered applicable to any case where on introduction the lock is external to the vulva. The author advocates the use of the forceps within the uterus if necessary, saying very truly that "to wait until the lips of the os can no longer be felt is to wait for what may possibly never occur." The necessity of feeling the ear before applying the forceps he considers needful only where a large caput succedaneum has obliterated our landmarks on the cranium, and adds, "But to accept this as a rule for our guidance in every case is both unnecessary and unjustifiable, as the ear, in some cases in which we may hold the operation perfectly justifiable, can only be reached with difficulty or with an amount of violence which may greatly aggravate the sufferings of the patient."

In regard to the method of applying the blades the author's trumpet appears to give a somewhat uncertain though melodious sound. "If possible," he says (page 523), "the blades should be applied to the sides of the child's head. To do this with accuracy, it is necessary that the actual position of the head be made out with perfect certainty. . . . And as there are four possible cranial positions, we must first be sure with which of them we have to deal before we ever take the instrument into our hands. . . . The method of application will depend upon the situation of the head: . . . the nearer it is to the outlet, the more will we require to apply the blades in the transverse diameter of the pelvis. Where, however, the head is higher, its position is more decidedly oblique, and even at the outlet a little of the obliquity still obtains; so that, to *insure*

*their application to the sides of the head* [our italics], we must apply them," etc. etc. The author then describes the situation: patient on her left side, hips to the edge of the bed; then the administration of chloroform,—evidently considering it as necessary as the previously described warming and greasing of the blades. (The author considers ether, by the way, as dangerous in midwifery, as he believes it induces hemorrhage.) Then (page 526), after describing the method of introduction and reaching the difficulty of locking the blades, he says, "Should this occur repeatedly after partial removal and introduction, it may be advisable to withdraw the lower blade and introduce it with reference to the other, as there is a possibility of a mistake having been committed as to the position of the head, and it is, besides, a *matter* of far *greater importance* to have the blades exactly opposite to each other than to have them accurately adapted to the transverse diameter of the head. The best test of a proper application of the forceps is the perfect locking of the blades after their introduction." This is certainly a long way off from the previously quoted advice; and why need a diagnosis be made at all beforehand, if the best test is so easily obtained, and perfect locking by no means implies adjustment to the sides of the head? The writer, in using an instrument very similar to that figured by the author, has succeeded many times in easily locking though the blades were by no means symmetrically applied.

The author, his blades being locked, advises the use both of traction and leverage,—"a swaying movement of the hands." Using the instrument that he does, he cannot make use of that downward pressure upon the lock which is so valuable in forceps of the Hodge pattern.

Timidity in the use of the forceps characterizes the chapter.

On page 529 we find the following: "This leads us to observe that, if practicable, the assistance of another practitioner should always be obtained,"—advice which we look for in vain in reading the chapter on Embryotomy. Again, page 534, "No one should under any circumstances take the long forceps into his hands without a sense of responsibility much greater than attaches to the ordinary operation." In fact, the two chapters abound in little touches not at all calculated to steady the arm or reassure the mind of the inexperienced operator. In regard to the long forceps the author entirely gives up all idea of application to the sides of the head. These forceps he describes as the so-called Simpson forceps, with loose locks, and a length of ten and one-half inches from lock to tip. Page 536: "Our object, then," in using the long forceps, "is not . . . to secure their application to the sides of the cranium, but rather to introduce them with special reference to the pelvic walls." These forceps also are applied with the patient in the usual obstetric position. In regard to locking, he here also regards it, if perfect, as proof enough of proper application. "But if, on the contrary, we do not succeed in introducing and locking the blades after one or two attempts carefully conducted, we must abandon the case as one unsuitable for the operation." By this we understand the author to mean, Abandon the forceps—not the case—for some other means of relief; which to us appears like giving up too easily, and too readily falling back upon—we presume, that favorite resort in the United Kingdom—craniotomy and its perils.

Space forbids further remark; but we are convinced that Dr. Leishman's book is destined to become a favorite with all who read it. Chapters and pages like those last noticed—and they are very few—are lost in the many undoubted merits of the work, which we presume will soon appear in reprint in this country. It is to be hoped that the volume will have the advantage of a careful editor, that it may be made to conform in a few respects with the ideas and customs in vogue upon this side the Atlantic.

## SELECTIONS.

### ALBUMINOUS EXPECTORATION.

I.

A VERY lively and very long-drawn-out discussion on this subject has occupied a good deal of the time of some of the societies, and of the space of most of the medical journals, of France, since the beginning of the year. The debate appears to be drawing to a close; and we avail ourselves of a spirited summary by M. Labbée in the *Mouvement Médical*, to give our readers a review of what has been said and written on the matter.

*A tout seigneur tout honneur.* M. Terrillon, last March, defended an unusually good and interesting thesis on the *Albuminous Expectoration following Thoracentesis.* He is the cause of all the commotion; armed by twenty-one observations, of which six are unpublished, he started the debate. He did not wish, he said, in any way to attack the favorable position of thoracentesis; his aim was to draw attention to that phenomenon which M. Pinault was the first to point out in his thesis in 1853, in which he sought to arrive at its rational explanation. In 1869, M. d'Espine communicated to the Société de Biologie two instances of abundant serous expectoration following thoracentesis. In 1872, M. Woiller, in his clinical treatise on acute affections of the respiratory organs, quoted observations of this kind (pp. 4, 8, *et seq.*). M. Marrotte, on May 22, and M. Béhier, on July 30, communicated to the Academy of Medicine facts on the subject worthy of attention.

It will be well to examine *seriatim*, by the light of this discussion, the symptoms and kinds of expectoration which ensue after thoracentesis: the origin of the expectoration, its duration, the nature of the fluid, and its quantity; the mechanical and microscopical examination of the two fluids and the two deposits, one proceeding from thoracentesis, the other from expectoration; and the symptoms and complications. After this, the various hypotheses which have been adopted to explain this accident may well be considered.

The expectoration of albuminous fluid after thoracentesis, according to M. Terrillon, presents three different characters, according to the quantity expectorated, and the gravity or mildness of the symptoms. The mild form is characterized by slight dyspnœa, and by the expectoration of a fluid in which the presence of albumen is revealed by nitric acid, and which varies in quantity from a few up to 700 or 800 grammes, when it has attained a sufficient duration, which may vary in time from a few hours to about a day. The intense form bears the following characteristics: acute dyspnœa; abundant expectoration (1200, 1500, 2000 grammes, and even more); frequent cough, generally spasmodic, accompanied by fine subcrepitant râles. The duration of these symptoms varies from several hours to a whole day. In the third and most serious form, the patient, after twenty or five-and-twenty minutes of comparative quiet, is suddenly seized with acute, very intense, and most painful dyspnœa, with spasmodic cough, accompanied by a frequent spitting of froth, after which death supervenes, with all the symptoms of asphyxia caused by the accumulation of liquids and spumous matter throughout the respiratory system. M. Terrillon relates only two fatal cases out of the twenty-one which he has been able to bring together, to which MM. Béhier and Liouville have added the record of a third. The escape of this albuminous liquid generally takes place from ten

minutes to one hour after thoracentesis. It is of a yellowish color, more or less transparent, according to the amount of expectoration; a persistent froth forms the upper layer, the middle layer being represented by the fluid, and the lower layer by a deposit of mucous products given off by the bronchi. It coagulates when treated with nitric acid.

The analysis made by M. Bergeret includes the daily examination of the two fluids, and the microscopic examination of the deposits of both. The pleural fluid evacuated by operation was, after filtration, amber-colored, alkaline, and poor in mucine. A hundred grammes, treated by an alcoholic solution of carbolic and acetic acids (Méhu's reagent), gave 1.61 grammes of albumen after drying. The expectorated fluid, mixed with mucus, was, after filtration, clear, slightly tinged with red, viscous, alkaline; and, when treated with acetic acid, gave a copious precipitate of mucine; 100 grammes, precipitated by Méhu's reagent, gave 1.42 grammes of dried albumen mixed with mucine. The microscopic examination of the deposit of the expectorated liquid showed epithelial cells in large quantity, together with pus-corpuscles and sometimes red blood-corpuscles. In the deposit of the liquid of thoracentesis, pus-corpuscles only, and very few red corpuscles, were seen.

The question arises, what are the possible relations between albuminous expectoration and the copiousness of the effusion? The cases reported by M. Terrillon show, in the first instance, the abundance of the liquid in the pleural cavity, of which the average was generally from two to two and a half quarts. The most minute care was always observed in the operations. As to the more or less grave complications which may have preceded the operation, it is easy to agree with M. Terrillon, that they could not possibly have had any direct influence on the accident under consideration. The syncopal condition, the cough, the striking of the lung against the canula, the passage of air through the canula, have all been given as predisposing causes; but very reasonable explanations have been opposed to such interpretations of the phenomena. The influence of the nature and age of the effusion on the production of the expectoration has been decisively proved to be *nil*, since the majority of the cases (15 out of 20) were instances of acute pleurisy, in which thoracentesis was performed twenty or thirty days after the commencement of the disease. Nor can heart-disease be really considered as a predisposing cause; since it either did not exist or was not detected in the cases of pleurisy. One circumstance remains to which some importance might be attached: the rapidity with which the pleural liquid made its escape was noticeable in all the cases cited by M. Terrillon. We shall return to this point. The expectoration can certainly not be confounded with bronchorrhœa: its difference of character is quite clear, as shown by the reaction given by adding nitric acid.

We now arrive at the hypothesis by which this expectoration has been explained. *Auctores certant;* and we find ourselves in presence of four opinions, arranged by M. Terrillon in the following order: 1. Perforation by the trocar; 2. Spontaneous perforation; 3. Re-absorption of the liquid remaining after thoracentesis; 4. Transudation of the sero-albuminous liquid through the alveolar walls, in consequence of rapid pulmonary congestion.

M. Féréol attributes the albuminous expectoration to the *passage of the pleural liquid by the lung.* In order to explain the spontaneous perforation, he imagines a special change, characterized by destruction of the epithelium and the connective tissue of the pleura, a sort of membrane being thus formed, which would allow the filtration of the pleural liquid into the lung, and its expulsion by the bronchi, without allowing the air to pass. This theory has caused one of the first who denied spontaneous perforation, M. Dujardin-Beaumetz, to remark, "Then let us employ powerful suction, such as that of the aspiratory apparatus." It is as difficult to demonstrate the existence of this perforation without pneumothorax, as it is rare to meet with pleuro-bronchial perforation in the adult. All observers have seen and cited instances of spontaneous pulmonary perforation, without pneumothorax, in purulent pleurisy; but not at all, or very rarely, in serous pleurisy. M. Barthez has demonstrated that in children absence of pneumothorax is the rule.

M. Féréol says that, there having been a preparatory process, ulcerative or otherwise, a fit of coughing comes on, and perforation occurs in the struggle. M. Moutard-Martin asks how this perforation is accomplished; and M. Féréol's answer is, "By a violent effort directed from the bronchial tubes towards the pleura; by a forced distention of the lung, which is no longer supported by a sufficient compression of the effusion; the air then contained in the bronchial tubes would be driven towards the pleura." This perforation, however, should take place at the moment when the vacuum is produced; but albuminous expectoration shows itself at a more or less distant period after the operation. We might further cite, against spontaneous perforation, Boule's case from Béhier's lecture (*Union Médicale*, 175), where the patient underwent four successive thoracenteses, each followed by albuminous expectoration. It is in fact not possible to admit that four spontaneous perforations should have occurred in one subject, or that they should have been found in both lungs, the operation having been performed on both sides. We must therefore give up M. Féréol's very ingenious hypothesis, and the subtle explanations with which he supplements it.—*British Medical Journal*, Oct. 4.

## GLEANINGS FROM OUR EXCHANGES.

ANTIPYRETIC TREATMENT IN THE FEBRILE DISEASES OF CHILDREN.—Dr. G. Mayer has treated (*Jahrb. für Kinderheilkunde*, vi. 3, p. 271, 1873) typhus (enteric?) fever, pneumonia, scarlet fever, and erysipelas, occurring in children, by cold baths.

Of enteric fever (?) he treated more than twenty cases; all with a good result. The youngest child so treated was seven months old. The temperature of the water employed was 90° Fahrenheit to begin with, gradually reduced to 80° or even 70°. The duration of the bath was ten to fourteen minutes. An axillary temperature of 103.5°, or a rectum temperature of 103°, was regarded as the indication for a bath.

In catarrhal pneumonia Mayer abstains from baths; the danger to life lying, as he truly says, not in the pyrexia, but in the suffocation. In lobar pneumonia (croupal pneumonia, peripneumonia), on the contrary, antipyretic treatment is very useful. An infant, seventeen months old, was treated in this manner; in eleven days sixty baths, reduced to a temperature of 80° and 75°, were given. Mayer especially recommends cold baths or ice to the head in cases of pneumonia complicated with a convulsive tendency; deeming the convulsions to depend upon the pyrexia.

The results of cold baths in scarlet fever are not so satisfactory, except in the ataxic (or "malignant") form of the disease, which has been treated in this manner, as everybody knows, since the days of Currie (1805).

Quinine he has tried in enteric fever; for a child of six, from seven to twelve grains, in two doses, half an

hour or an hour apart, in the evening. A notable fall of temperature follows. Occasionally vomiting, deafness, and slight increase of diarrhœa ensue.—*London Medical Record.*

INOCULABILITY OF ECTHYMA.—Vidal, one of the physicians to the St. Louis Hospital, Paris, in an interesting paper in the *Annales de Dermatologie et de Syphiligraphie*, No. 5, 1873, gives the result of some experiments with the inoculation of the matter taken from the pustules of ecthyma. Two series of experiments are recorded, one with the pus of ecthymatous pustules developed in the course of grave typhoid fever, the other with the pus of ecthyma simplex. The experiments were conducted with every requisite precaution, and their results may be summed up as follows:

1. The pustules of the ecthyma of typhoid fever and those of ecthyma simplex are auto-inoculable.

2. The pustule of inoculation follows, in the phases of its development, a course identical with that of the original pustule. The first day, several hours after the inoculation, we see at the place of puncture a red point, already a little indurated, and which is usually the seat of considerable itching. The second day the redness extends itself, and an elevated, firm nucleus forms. The third day the redness is greater, the inflammatory indurated nucleus points and forms the base of a little vesicle containing a small quantity of cloudy, serous matter. The fourth day the pustule of ecthyma is perfectly characteristic, fully developed, and furnishes an inoculable pus. It desiccates by the ninth or tenth day, and the crusts fall from the sixteenth to the twentieth day.

3. The liquid taken from the second generation of the pustules is also auto-inoculable.

4. Its activity diminishes in the successive inoculations: the power to reproduce ceases with the third or fourth generation.

ABORTIVE TREATMENT OF BOILS.—The following, applied to boils with a camel-hair pencil or feather, gives great relief in a very short time. The inflamed surface, and a little beyond all around, should be painted with the medicine every fifteen minutes, or as fast as it dries, till a good thick coating covers the part. The throbbing tensive pain and the intense tenderness will be promptly relieved; the redness will subside; the smooth, shining integument will shrink and become wrinkled, and comfort will succeed torment. If the boil is in the first stage, it will disappear without slough. If slough has already formed, it will be quickly separated, and the cure soon complete:

℞ Tinct. arnicæ, ʒj;
Acidi tannici, ʒss;
Acaciæ pulv., ʒss. M.

It should be used as soon as prepared.—*C. B. Hall, in Cincinnati Lancet and Observer.*

COD-LIVER OIL MIXTURE.—A preparation that has met with much favor, under the above name, has been made by the writer from a formula given him by Mr. Hassard of Philadelphia. It is made as follows: ℞ Fresh eggs, No. iv; lemon-juice, q. s. Place the eggs in a suitable vessel, and pour over them sufficient lemon-juice to cover them, and let the whole remain for twenty-four or forty-eight hours. Then pass the whole through a strainer, and add, with agitation, the following, and in the order given: To the lemon-juice and eggs add an equal volume of honey, cod-liver oil, and brandy or whisky. The whole forms a permanent emulsion, and will keep good during the summer months for a month, and longer in cooler weather. The taste of the oil can be completely covered by the addition of a few drops of oil of wintergreen or oil of bitter almonds. This mixture is pleasant to take, and a valuable therapeutic agent.

P.S. Glycerin may be substituted for the honey.—E. S. W.—*Cincinnati Lancet and Observer*, Sept. 1873.

PERFORATING ULCER OF THE FOOT.—MM. Duplay and Morat (*Arch. Gén. de Méd.*, March and May, 1873) ascribe perforating ulcer of the foot to a degeneration of the nerves of the part. This degeneration may be of entirely peripheral origin, just as frost-bite induces degeneration of the nerves and a tendency to ulceration; or it may be connected with a more deeply-seated affection of the sciatic nerve, or with disease in the spinal cord. The authors, therefore, place perforating ulcer of the foot in the same category with the ulceration of the cornea which follows section of the trigeminus nerve. The principal symptoms agree with this view, being indicative of disturbance of sensation and nutrition. The inflammation which surrounds the ulceration affects all the tissues, including the arteries, which are sometimes diseased to so great an extent that many have attributed the ulceration to arterial sclerosis. The prognosis will evidently depend on the possibility of treating the nervous disorder with success.

INOCULABILITY OF EPITHELIOMA (*British Medical Journal*, September 20, 1873).—Dr. J. Wickham Legg reports the results of some experiments made upon guinea-pigs and white rats. In the cases of successful inoculation which have been recorded of late years, some hours have usually elapsed between the removal of the epitheliomatous growth from the human patient and its inoculation, thus making it probable that it acted as any other dead mass. In Dr. Legg's experiments the animals were prepared in advance, and not more than sixty or eighty seconds passed between the separation of the tumor and the inoculation of a thin slice taken from its most rapidly growing portion. This was done in five cases; the animals were kept alive for six months and then killed, but there were no discoverable lesions, new growths, or tuberculosis.

CHIONANTHUS VIRGINICA (*New York Medical Review*, September, 1873).—Dr. I. J. M. Soss recommends chionanthus as a potent alterative and cholagogue, and has found it of great value in hypertrophy of the spleen and liver in cases of extreme and persistent jaundice and indigestion. He uses a tincture made from the bark of the root in the proportion of eight ounces to a pint of alcohol.

## MISCELLANY.

THE DANGER FROM LIGHTNING.—The Hartford *Courant* has been figuring up the chances of being struck by lightning, and arrives at the following reassuring results: "Taking the figures of the last census report for our facts, we find that during the year 1870 there were, in the whole country, 202 deaths from lightning-stroke. Let womankind take notice that out of these 148 deaths were of males, and only 54 of females. The total number of deaths from all causes was nearly 500,000. There were 2437 deaths from other causes to one death from lightning; and there were 190,883 persons living to every one killed by this cause. It is somewhat singular that the lightning was decidedly more destructive with both males and females between the ages of ten and thirty years than with any others;

between ten and fifteen years is the most fatal time, but even then the number is very small. Much comfort for those still inclined to be timorous is to be found in going back further on the record. The deaths by lightning in 1870 were only eleven more than in 1860, while the population had increased more than 7,000,000, and the rate is declining, in spite of the hasty conclusions formed by reading the news of a day. In 1860 there were forty-eight deaths by lightning out of every 100,000 deaths from all causes; in 1870 the rate was only forty-two. But now, while only 202 persons died from lightning-stroke in 1870, there were 397 deaths from sunstroke, or nearly twice as many. Yet the number of persons who shudder when they see the sun rise would bear a very small ratio to those who shudder at the rising of the thunder-cloud. The rate of deaths by sunstroke has declined during the decade from ninety-one to eighty-one in 100,000 deaths from all causes, and, with the increase in care and information on the subject, is likely to decrease still more, but it will always probably be largely in excess of the lightning rate. It is also noticeable that there were 1345 deaths by suicide, while there were only 202 deaths by lightning: in other words, an individual is six times as likely to kill himself as lightning is to kill him."

MANUFACTURE OF CARMINE.—This is one of Nature's most gorgeous products in the way of color. That lovely, rich shade of red is solely produced from a decoction of the cochineal-bug. Wherever the cactus is indigenous, there this little insect is to be found in myriads, feeding on the plant and imbuing its own blood with the glorious red of the flower. Only the females are used for making carmine; but, as there are three hundred females to one male, there is not much difficulty in picking out that solitary representative of the ruling sex. Woman's rights have full sway in this particular branch of the insect kingdom. The excellence and purity of this color and vermilions—in fact, of all colors—depend upon careful and thorough washing in water. Some vermilions are washed as often as sixteen times before the pigment is sent to the drying-rooms. In the manufacture of some of the finer colors, too, milk, eggs, or cheese are used with the chemicals as purifiers. The most surprising thing, says a correspondent of the New York *Times*, describing the Plymouth Color Works at Bergen Point, New Jersey, is to see the water that is drawn off from the huge tanks of color after it has been well stirred and washed. The tanks being lined with fine muslin, not a particle of color escapes, and the water is pure and clear as drinking-water. Lakes of different shades are made from carmine combined with a chemical body, which cheapens the color and makes it of any desired hue.—*The Monthly Mirror.*

THE MALADY OF THE FIRST NAPOLEON.—The following interesting letter, along with a lock of hair, has been recently discovered by Major Young, of Lincluden, Scotland. It was written to his father by Dr. Short, principal medical officer at St. Helena at the time of Napoleon's death: "St. Helena, 7th May, 1821.—You will, no doubt, be much surprised to hear of Bonaparte's death, who expired on the 5th of May, after an illness of some standing. His disease was cancer in the stomach, that must have lasted some years, and been in a state of ulceration some months. I was in consultation and attendance several days, but he would not see strangers. I was officially introduced the moment he died. His face in death was the most beautiful I ever beheld, exhibiting softness and every good expression in the highest degree, and really seemed formed to conquer. The following day I superintended the dissection of his body (at this time his countenance was much altered), which was done at his own request, to ascertain the exact seat of the disease (which he imagined to be where it was afterwards discovered to be), with the view of benefiting his son, who might inherit it. During the whole of his illness he never complained, and kept his character to the last. The disease being hereditary, his father having died of it, and his sister, the Princess Borghese, being supposed to have it, proves to the world that climate and mode of life had no hand in it; and, contrary to the assertions of Messrs. O'Meara and Stobo, his liver was perfectly sound; and had he been on the throne of France, instead of an inhabitant of St. Helena, he would equally have suffered, as no earthly power could cure the disease when formed."—*British Medical Journal.*

GARMENTS MADE WATERPROOF.—A writer in an English paper says, "By the way, speaking of waterproofs, I think I can give travellers a valuable hint or two. For many years I have worn india-rubber waterproofs, but will buy no more, for I have learned that good Scotch tweed can be made entirely impervious to rain; and, moreover, I have learned how to make it so; and, for the benefit of your readers, I will give the recipe: In a bucket of water put half a pound of sugar of lead and half a pound of powdered alum; stir this at intervals, until it becomes clear; pour it off into another bucket, and put the garment therein, and let it be in for twenty-four hours, and then hang it up to dry, without wringing it. Two of my party, a lady and gentleman, have worn garments thus treated in the wildest storms of wind and rain, without getting wet. The rain hangs upon the cloth in globules. In short, they are really waterproof. The gentleman, a fortnight ago, walked nine miles in a storm of rain and wind such as you seldom see in the South; and when he slipped off his overcoat his underwear was as dry as when he put them on."—*The Monthly Mirror.*

EIGHTEEN Norwegians, separated in September, 1872, from their ship on the northern shores of Spitzbergen, were forced to winter at a place on the shore called Mitterbuk, where they were all found, a few weeks ago, dead, by Captain Mack, who was sent in quest of them. They had no lack of food, of a kind, as biscuit was found beside them; but they wanted vegetables, and, scurvy setting in, they languidly crowded over the fire, and so died one by one. Want of provisions might

have proved their salvation; for men cast ashore at Spitzbergen immediately set about scraping antiscorbutics from under the snow, and keep up the circulation in hunting wild animals, whose warm blood when drunk also prevents scurvy, and whose furs supply clothing. Six Dutchmen, a good many years ago, wintered at Spitzbergen in this way, and survived. They were wiser in their generation, however, than the unfortunate Norwegians, who perished (as did also a second crew from Holland, who wintered there before them) by neglecting the pursuit of wild beasts and antiscorbutics, and shivering before the fire in their hut.—*The Canada Medical Times.*

M. B. A. of France.—The *Medical Benevolent Association of France* held its fourteenth annual meeting April 20 and 21. Its finances are highly prosperous, the society having funded 335,046 francs. The proposition was made by the treasurer to begin granting annuities in 1874, that is, four years sooner than originally intended.—*Western Lancet.*

Female Dentists.—In a short time, says the *Vienna Medical Press*, Fräulein Föckling, D.D.S., a young lady of Berlin nativity, will establish herself in Berlin in the practice of her profession. Miss Föckling graduated in Baltimore, March 1, and remains at present in the office of a celebrated dentist of that city, to perfect herself in practical dentistry. The *Allg. Mediz. Centralblatt*, which communicates this interesting intelligence, reports further that the young lady prosecuted her studies with the greatest zeal and with remarkable success. As she ascended the platform, March 1, attired in a most elegant robe *en train*, and received her diploma from the Dean of the College, she was overwhelmed with applause and bouquets of flowers.

Professor Rokitansky.—This distinguished ornament of the Vienna Medical School has announced to the Professoren-Collegium that next year he will have attained his seventieth year. According to the regulations, he should then retire from his professorship and be placed on the pension-list. It seems, however, that, seeing the great loss his retiring would inflict upon the Vienna School, of which he may almost be considered the founder, an effort will be made to have his case regarded as an exceptional one, as long as his present good health and teaching power continue.—*Boston Medical and Surgical Journal.*

Unfortunate Case of Sneezing.—In a letter Dr. Y. A. Winn says, "I will mention a very singular case, —singular to me at least. A gentleman informs me that when prompted to sexual commerce he is seized, immediately prior to the act, with a fit of violent sneezing: not unfrequently even the *thought* of coition produces this effect. The gentleman being married, we are at a loss for a satisfactory remedy. Fortunately, his wife has never *apparently* noticed this peculiarity. If she should, and he did much sneezing in the presence of other ladies, even *sneezing* might be a sufficient ground for divorce."—*Western Lancet.*

Natural Red Silk.—M. Ruimet des Taillis, writing in the *Chronique de la Société d'Acclimatation*, states that by feeding silkworms on vine-leaves he has obtained cocoons of a magnificent red, and, by employing lettuce, others of a deep emerald-green. M. Delidon de Saint-Gilles, of Vendée, has obtained silk of a beautiful yellow, other samples of a fine green, and others again of a violet, by feeding the silkworms on lettuce or on white nettle. He points out that the silkworms must be fed on mulberry-leaves when young, and supplied with the vine-, lettuce-, or nettle-leaves during the last twenty days of the larva-stage of their life.—*Druggists' Circular.*

Every physician in regular practice, in city and country, should not only take one or more medical journals, but contribute as well. A large and lucrative practice, a high and influential position, are not alone sufficient to perpetuate a worthy name and reputation. These are perishable and will die out, when well-timed and well-recorded facts will last and establish true and genuine worth. Zimmermann remarked "*that the greatest medical writers of any age were the best physicians.*" Those who communicate their views should rather be encouraged than decried.—*President's Address, Canada Medical Association.*

Cheerful.—In the province of Quebec, lunatics are generally sent to jail and kept there till they become permanently insane and hopeless, when they are sent to the asylum to become permanent burdens on the province.—*The Canada Medical Record.*

Burning of the Dead.—A society has recently been formed at Zurich, Switzerland, the members of which pledge themselves to have their bodies burned after death, in place of the usual burial. The society already has a large number of adherents.

Pruritus Vulvæ.—Take of bichloride of mercury, one part; alum, twenty parts; starch, one hundred parts; water, twenty-five hundred parts. Mix. Apply freely to the part.—*Revue de Thérap.*

The brain is a splendid piece of tapestry, of which the Creator has furnished the canvas and we have filled in the stitches.—*Fournier.*

The locusts have done so much damage in Nepaul, India, during the past season, that a famine is imminent.

Numerous cases of enteric fever have occurred in the Rhymney valley, South Wales.

## OFFICIAL LIST

*OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY, FROM OCTOBER 14, 1873, TO OCTOBER 20, 1873, INCLUSIVE.*

Ghiselin, J. T., Surgeon.—Relieved from duty in Department of the Columbia, and ordered to Department of Texas. S. O. 206, A. G. O., October 15, 1873.

Hubbard, Van Buren, Assistant-Surgeon.—Granted leave of absence for thirty days. S. O. 162, Department of the Gulf, October 11, 1873.

Kimball, J. P., Assistant-Surgeon.—Granted leave of absence for thirty days. S. O. 224, Department of Dakota, October 9, 1873.